BYV32–50M
BYV32–100M
BYV32–150M
BYV32–200M

HERMETICALLY SEALED DUAL FAST RECOVERY SILICON RECTIFIER FOR HI–REL APPLICATIONS

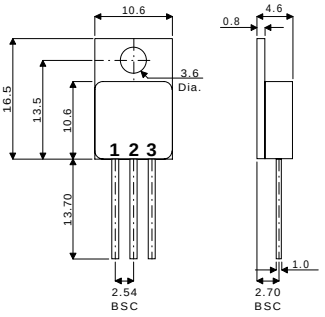
- **STANDARD (COMMON CATHODE)**
- **COMMON ANODE**
- **SERIES CONNECTION**

FEATURES

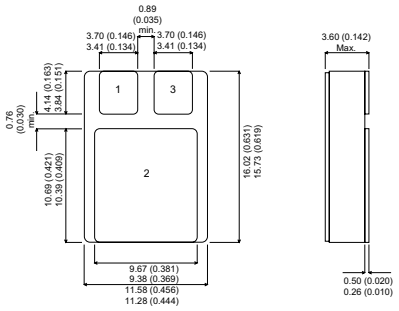
- **HERMETIC TO220 METAL OR CERAMIC SURFACE MOUNT PACKAGE**
- **SCREENING OPTIONS AVAILABLE**
- **ALL LEADS IOLATED FROM CASE**
- **VOLTAGE RANGE 50 TO 200V**
- **AVERAGE CURRENT 20A**
- **VERY LOW REVERSE RECOVERY TIME – t_{rr} = 35ns**
- **VERY LOW SWITCHING LOSSES**

Applications include secondary rectification in high frequency switching power supplies.

MECHANICAL DATA
Dimensions in mm

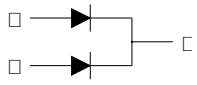
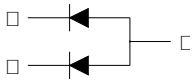
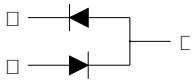


TO220 METAL



SMD1
CERAMIC SURFACE MOUNT

ELECTRICAL CONNECTIONS

Common Cathode	Common Anode	Series Connection
BYV32-xxxM	**BYV32-xxxAM**	**BYV32-xxxRM**
		
1 = A_1 Anode 1	**1 = K_1 Cathode 1**	**1 = K_1 Cathode 1**
2 = K Cathode	**2 = A Anode**	**2 = Centre Tap**
3 = A_2 Anode 2	**3 = K_2 Cathode 2**	**3 = A_2 Anode**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

			BYV32 –50M	BYV32 –100M	BYV32 –150M	BYV32 –200M
V_{RRM}	Peak Repetitive Reverse Voltage		50V	100V	150V	200V
V_{RWM}	Working Peak Reverse Voltage		50V	100V	150V	200V
V_R	Continuous Reverse Voltage		50V	100V	150V	200V
I_{FRM}	Repetitive Peak Forward Current	t_p = 10µs	200A			
$I_{F(AV)}$	Average Forward Current	T_{case} = 70°C	20A			
	(switching operation, δ = 0.5, both diodes conducting)					
I_{FSM}	Surge Non Repetitive Forward Current	t_p = 10 ms	80A			
T_{stg}	Storage Temperature Range		–65 to 200°C			
T_j	Maximum Operating Junction Temperature		200°C			

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E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

Prelim. 7/00

ELECTRICAL CHARACTERISTICS (Per Diode) (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
I_R	Reverse Current	$V_R = V_{RWM}$	T_j = 25°C			30	µA
		$V_R = V_{RWM}$	T_j = 100°C			0.6	mA
V_F *	Forward Voltage	I_F = 8A	T_C = 25°C			1.1	V
		I_F = 20A	T_C = 25°C			1.5	
		I_F = 5A	T_C = 100°C			0.95	
t_{rr}	Reverse Recovery Time	I_F = 2A di / dt = 20A/µs	V_R = 30V			35	ns
		I_F = 1A di / dt = 50A/µs	V_R = 30V			50	ns
Q_{rr}	Recovered Charge	I_F = 2A di / dt = 20A/µs	V_R = 30V			15	nC
V_{FP}	Forward Recovery Overvoltage	di / dt = 10A/µs	I_F = 1A		1.0		V

* Pulse Test: $t_p \leq 300\mu s$, duty cycle ≤ 2%.

THERMAL CHARACTERISTICS (TO220 METAL CASE)

$R_{\theta JC}$†	Thermal Resistance Junction – Case				1.6	°C/W

† Both diodes conducting.